

MODIS TECHNICAL TEAM MEETING

August 14, 1996

The MODIS Technical Team Meeting was chaired by Vince Salomonson. Present were David Herring, Bill Barnes, Robert Murphy, Steve Ungar, Locke Stuart, Al Fleig, Ed Masuoka, Dick Weber, Yoram Kaufman, Eric Vermote, and Michael King.

1.0 SCHEDULE OF EVENTS

Aug. 16	Revised ATBDs due to the EOS Project Science Office
Aug. 16	Validation Summary Plans due
Sept. 4 - 5	SDST Science Advisory Panel Meeting at GSFC
Oct. 8	MODIS Calibration Working Group at GSFC
Oct. 9 - 11	MODIS Science Team Meeting at GSFC

2.0 MINUTES OF THE MEETING

2.1 MODIS Project Reports

Weber reported that four resistors failed in recent tests at SBRS. Weber stated that there are several hundred of these parts in the protoflight instrument, and SBRS may have to change most of them. Depending on additional tests on leftover parts, the schedule could slip by as much as two months.

Weber reported that in tests at SBRS this week, the Flight Model 1 (FM-1) radiative cooler wasn't getting cold enough. SBRS is preparing to adjust the setup and retest the system. Weber pointed out that this is a PM MODIS issue, so it will not cause the AM MODIS schedule to slip.

Weber announced that the Spherical Integrating Source round robin is in progress now at SBRS, with participation of several calibration organizations.

2.1.1 MODIS Band Center Concern

Barnes told the Team that he is working on the problem perceived by Peter Minett regarding potential shifts in MODIS' band centers. According to Barnes, Minett wrote an e-mail memo in which he states that MODIS bands 20, 31, and 32 won't work as well as AVHRR's comparable bands unless great care is taken to characterize the centers of those bands. But Barnes asserts that SBRS will be able to measure those bands and get the band center information that Minett needs. Minett is concerned that if there is water vapor in the laboratory when SBRS is making its measurements, SBRS' placement and width of each band will be in error. Barnes stated that work is continuing on either developing a test that will correct for the effects of water vapor, or will eliminate water vapor from the optical path.

2.2 ATBD Status Update

Salomonson asked if the MODIS Team is now consistent in revising its ATBDs. King responded that he has received a revised ATBD from only one team member—Howard Gordon. King is also working on putting together a review panel for the second generation ATBDs, and is seeking someone to chair the review session. Murphy noted that MODLAND is still awaiting the report from the algorithm review organized by Sellers. They do not plan to do their update until this input has been received.

2.3 SDST Reports

Masuoka reported that the EOSDIS contractor and SDST will be working together to define Earth Science Data Types (ESDTs) for MODIS products. ESDTs for Version 1 must be completed in October 1996.

Salomonson inquired as to the status of the DAO (Data Assimilation Office) data sets being written in EOS-HDF. Masuoka responded that he did not know of a science team member who wanted the DAO data in the EOS-HDF format.

Vermote observed that the code is already written to take ancillary code in one format, so if it is provided in another format then the principal investigators will have to change their code.

2.3.1 MODIS Synthetic Data

Fleig announced that 16 days of synthetic data are available to MODIS team members. Currently, the data are in Version 1, Level 1B format. Fleig stated that they now contain plausible looking clouds, varying aerosols, chlorophyll in the oceans, and fires and volcanoes on land. He noted that the synthetic data set does not yet contain fluorescence; but he is working on that. He encourages any team member looking for synthetic data for their Version 1 algorithm to use his data set.

2.3.2 EOSDIS Hardware Cost Estimate

Masuoka reported that Steve Kempler and he are meeting next week with ESDIS personnel to put together a cost estimate for providing the Release A DAAC environment EOSDIS hardware .

Vermote requested to see the formula that Masuoka and ESDIS use in deriving their cost estimate, once it is ready.

[Provided by Masuoka after the meeting -The formula used to compute the MFLOPS for processing is: 1.2 times the estimate for at-launch, 2 times the estimate for launch + 1 year and 4 times the estimate at launch+2 gives one the total MFLOPS of processing available at each point in time. The estimate is derived as follows:

1) If the MFLOPS provided by a scientist is based on actual runs on a computer system then it is divided by 4.

2) if the number is based on an estimate of the MFLOPS required it is turned in unchanged.

Once the EOSDIS modeling group gets the estimates they multiply them by 4 to account for the inefficiency of the computing system relative to the vendor's advertised MFLOPS rating . Thus those estimates which are based on actual runs remain unchanged.]

2.3.3 MODIS Alarms

Kaufman reminded the Team that MODIS will contain an alarm for volcanic eruptions; and that John Townshend is also now planning to include an alarm indicating a change in land use. He observed that an alarm could also be implemented for wild fires.

Fleig stated that the volcano alarm was implemented as a stand-alone algorithm. He feels that once we've done that, it serves as a prototype for any other alarm the Team wishes to implement. Masuoka added that the volcano alarm is a quick process and will be done at level 1B.

2.4 MAST Reports

Herring announced that the minutes from the last MODIS Science Team Meeting are now available on the MODIS Home Page in PDF (Adobe's Portable Document Format). The URL is <http://ltpwww.gsfc.nasa.gov/MODIS/MODIS.html>.

2.5 MODIS Project Scientist Reports

Murphy reminded the Team that their Validation Plan viewgraphs are now due. He also stated that a memo explaining the test matrix issue and spectral properties issues will be sent out to the Science Team for review and commentary.

3.0 ACTION ITEMS

3.1 Action Items Carried Forward

1. *H. Montgomery* to have someone summarize the current MODIS specifications and summarize current MODIS testing performance relative to the specs.
2. *L. Stuart* and *T. Mautino* to argue the case that two weeks is too soon to limit carry over money past the fiscal year.
3. *R. Murphy* to coordinate activities of the sea-ice temperature algorithm development.